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(54) ROLLING BEARING

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(57) Abstract:

PROBLEM TO BE SOLVED: To attain extending of a life, by improving lubricating ability and wearing resistance on a surface of a raceway ring and a rolling element, in a rolling bearing.

SOLUTION: In a rolling bearing A using a fluorocarbon lubricant, a diamond-like carbon film 5 is formed in at least any of a raceway surfaces of inner/outer rings 1, 2 or a surface of a rolling element 3. Since the fluorocarbon lubricant has good wettability relating to the diamond-like carbon film 5, an oil film of the fluorocarbon lubricant is difficult to be interrupted even when the rolling element 3 is slid without rolling. Even when the oil film is temporarily interrupted, by protecting a rolling/sliding location with the diamond-like carbon film 5 of very hard quality, direct contact between the inner/outer rings 1, 2 and the rolling element 3 is avoided.

